

Notice of Allowability

Application No.

10/643,633

Examiner

ALEXANDER BOAKYE

Applicant(s)

OLSSON ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/09/2007.
2. ☒ The allowed claim(s) is/are 1,2,4-5,23-26,6-12,13,15,16,18-22,27-31;renumbered as 1-28 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Edward Van Gieson on 7/16/07.

In claim 6, (line 15), after "Ethernet", "PHY", has been deleted and replaced with -
- PHY (physical)- -;

In claim 6, (lines 16, 17), "MAC" has been deleted and replaced with - - MAC
(medium access control) - -;

In claim 6, (line 18), "HDLC", and "GFP" have been deleted and replaced with - -
HDLC (high level data link control protocol) and GFP (generic framing procedure)- -;

In claim 12, (line 3), "POS/HDLC" has been deleted and replaced with - -
POS/HDLC (packet over SONET/high level data link control protocol)- -;

In claim 13, (line 9), after Ethernet", "PHY", has been deleted and replaced with -
- PHY (physical)- -;

In claim 13, (line 20), "MAC" has been deleted and replaced with - - MAC
(medium access control)- -;

In claim 13, (line 22), "HDLC", and "GFP" have been deleted and replaced with -
- HDLC (high level data link control protocol)- -;

In claim 26, (lines 2, 3), "GFP" and "POS/HDLC" have been deleted and replaced with - - POS/HDLC (packet over SONET/high level data link control protocol)- -

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance: Claims 1-2, 4-13, 15, 18-31 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims. As to claims 1, 2, 4-5, 23-26, the prior art of record does not teach wherein the protocol converter comprises: a first protocol converter disposed along a first data path associated with the incoming serial data stream, comprising: a deserializer to deserialize a TDM serial data stream into a parallel TDM data stream; a deframer for deframing the parallel TDM data stream; a de-encapsulator to de-encapsulate the parallel data stream into a GE protocol; and a serializer to convert a de-encapsulated parallel GE data stream into a serial GE data stream; and a second protocol converter disposed along a second data path associated with the outgoing serial data stream, comprising: a deserializer to deserialize a GE serial data stream to form a parallel GE data stream; an encapsulator to encapsulate the parallel GE data stream into the TDM protocol; a framer coupled to the encapsulator for generating TDM frames; and a serializer receiving an output of the framer to convert the parallel data stream into a serial TDM data stream.

As to claims 6-12, the prior art of record does not teach a first SERDES for coupling data to the serial transfer interface; a Gigabit Ethernet PHY module coupled to exchanged data between the first SERDES and a MAC module; an encapsulation module coupled to the MAC to perform an encapsulation protocol selected from the group consisting of frame relay, HDLC, and GFP; a framer coupled to the output of the encapsulation module; and a second SERDES for coupling data between the framer and the transceiver. As to claims 13 and 15, the prior art of record does not teach the protocol converter comprises: a first SERDES for coupling data to the serial transfer interface; a Gigabit Ethernet PHY module coupled to exchanged data between the first SERDES and a MAC module; an encapsulation module coupled to the MAC to perform an encapsulation protocol selected from the group consisting of frame relay, HDLC, and GFP; a framer coupled to the output of the encapsulation module; and a second SERDES for coupling data between the framer and the transceiver.

As to claims 16, 18-22, the prior art of record does not teach at the module, at the module, receiving at least one in-band Ethernet frame embedded within the serial data stream received from the router; and identifying at least one command from the router contained within the at least one in-band Ethernet frame. As to claims 27-31, the prior art of record does not teach at the module, forming a message to the router; and embedding the message in an in-band Ethernet frame transmitted in the serial data stream transmitted to the router; wherein the module is operative as both a transceiver and as a protocol converter. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays,

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should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Electronic Business Center (EBC)** numbers at 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner

AB

7/16/07


CHI PHAM
SUPERVISORY PATENT EXAMINER

7/18/07